Claims

1. An SAW component,

- having a piezoelectric substrate (S),
- having at least one transducer electrode, which is applied to the piezoelectric substrate and has a metallization (M) consisting of one or more metals whose mean specific density is at least 50% higher than that of Al, and
- in which, to reduce the temperature coefficient of frequency, a thin compensation layer (K) of a material, which has a temperature dependency of the elastic coefficient that counteracts the temperature coefficient of frequency of the substrate and is thinner than 15% of the wavelength capable of propagation in this structure, is applied fully or partially over the metallization.

2. A component as recited in Claim 1,
in which the elastic constants of the metallization exhibit less temperature dependency that those of the aluminum.

3. A component as recited in Claims 1 to 2,
in which the metallization (M) consists primarily of a metal and is selected from among copper, molybdenum, tungsten, gold, silver and platinum.

4. A component as recited in Claims 1 to 3,
in which the compensation layer (K) comprises SiO_2.

5. A component as recited in one of Claims 1 to 4,
in which the metallization (M) is selected from among copper or a copper alloy and has a relative metallization height of 6 to 14% h/λ.

6. A component as recited in one of Claims 1 to 5,

in which the compensation layer (K) consists of SiO_2 and has a height of 4 to 10% h/λ.

7. A component as recited in one of Claims 1 to 6,
in which the substrate (S) is lithium tantalate with a rotated cut.

8. A component as recited in Claim 7,
in which the substrate (S) is lithium tantalate with a rotated cut and an angle of intersection of between 30 and 48°.

9. A component as recited in one of Claims 1 to 6,
in which the substrate consists of lithium niobate.

10. A component as recited in one of Claims 1 to 6,
in which the substrate consists of quartz.

11. A component as recited in one of Claims 1 to 10,
in which an adhesive layer (H) is disposed beneath metallization (M).

12. A component as recited in Claim 11,
in which the adhesive layer (H) is selected from among Al, Mo, Ti, W, Cr, Ni or an alloy of these metals.

13. A component as recited in Claim 11 or 12,
in which the adhesive layer (H) has a thickness of 1 to 7 nm.

14. A component as recited in one of Claims 1 to 13,
in which the compensation layer (K) consists of SiO_2 with a refractive index of between 1.43 and 1.49.

15. A component as recited in one of Claims 1 to 14,
with a temperature coefficient of frequency TK < 20 ppm/K.

16. A component as recited in one of Claims 1 to 15, in which a passivation layer (P), which is thin relative to the compensation layer (K), is provided beneath said compensation layer.

17. A component as recited in one of Claims 1 to 16, constructed as an MPR (=multi port resonator) filter.

18. A component as recited in one of Claims 1 to 16, constructed as a reactance filter.

19. A component as recited in one of Claims 1 to 16, constructed as a DMS filter.

20. A component as recited in one of Claims 1 to 16, constructed as a SPUDT filter.

21. A component as recited in one of Claims 1 to 19, constructed as a duplexer.

22. A component as recited in one of Claims 1 to 19, constructed as a diplexer.

23. A component as recited in one of Claims 1 to 19, constructed as a 2-in-1 filter.

24. Use of a component as recited in one of Claims 1 to 20 for a filter or a duplexer for the US-PCS mobile wireless system.